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A Study on Consumer Satisfaction with Pet Products in Social E-Commerce from the Perspective of E-Commerce Politeness: A Multidimensional Weight Analysis Based on AHP

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ABSTRACT

The furry child economy continues to grow, and its consumer group aligns closely with users of social e-commerce platforms. This study takes e-commerce politeness as the point of departure and focuses on analyzing the influencing factors of consumer satisfaction in the process of purchasing pet supplies on social e-commerce platforms. Using the analytic hierarchy process, the study constructs an evaluation system consisting of five criterion layers—information retrieval services, purchasing services, payment environment, after-sales services, and community environment—along with 25 secondary indicators under these dimensions. Empirical data analysis and validation were conducted based on 120 valid questionnaires. The results indicate that the weight distribution across dimensions exhibits a clear hierarchical structure. Users place the greatest emphasis on the information filtering stage prior to purchase when buying pet supplies in social e-commerce scenarios, demonstrating a preference for the information retrieval services dimension. Building on this, the study further analyzes the secondary indicators and other dimensions and provides practical recommendations based on the findings.

KEYWORDS: Social E-Commerce, E-Commerce Politeness, Furry Child Economy, Consumer Satisfaction, Human- Computer Interaction, AHP.

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1. INTRODUCTION

The term “Furry Child” mainly refers to furry companion pets such as cats and dogs, and the furry child economy, as a specific branch of the broader pet economy, is growing rapidly in recent years. APPA’s 2025 Industry Status Report indicates that U.S. pet industry expenditures reach $152 billion in 2024, and the sector continues to expand, with spending projected to rise to $157 billion in 2025. (Cleaver, 2025). The report also indicates that the primary consumer age group of the furry child economy is between 20 and 35 years old, namely Generation Z, which aligns with the user group of social e-commerce platforms (Molinillo et al., 2021). Social e-commerce platforms demonstrate that e-commerce politeness enhances user trust (Chen & Zhang, 2025), brings positive emotional experiences, and increases user stickiness, leading users to stay longer on the platform and browse more products (Chen & Lu, 2025). This creates service encounters that allow users to experience products and services more directly, thereby improving

consumer satisfaction. However, most existing studies focus on the commercialization of emotional value in the pet economy (Feng, 2025) and the industrial structure of social e-commerce (Busalim et al., 2021), with fewer studies examining the influence of e-commerce politeness on user satisfaction during the purchasing process on Social e-commerce platforms. Therefore, this study takes e-commerce politeness as the entry point and focuses on analyzing the influencing factors of user satisfaction when purchasing pet products on social e-commerce platforms.

2. LITERATURE REVIEW

2.1 E-commerce Politeness

Politeness generally refers to interactive behaviors in interpersonal communication, in which both parties maintain dignity and feel "respected" through intuitive means such as language, gestures, or written expressions, thereby achieving smooth and harmonious communication (Al-Khatib, 2021). E-commerce politeness refers to users' experiential perceptions during "Human-Computer Interaction," that is, the overall feelings and interaction quality experienced by users during browsing, searching, purchasing, payment, and after-sales processes on electronic commerce platforms.

Whitworth (2005) proposes the concept of "polite software," suggesting that software (i.e., platforms) should demonstrate respect toward users, and that information should be transparent and easy to understand. In modern consumption contexts, consumers place greater emphasis on usage experience (Bardhi & Eckhardt, 2012). Studies indicate that e-commerce politeness plays an important role in shaping user experience on social e-commerce platforms (Chen & Huang, 2025). When the platform demonstrates a high level of e-commerce courtesy, it can significantly reduce users' cognitive load while simultaneously enhancing their trust in the platform. (Chen & Zhang, 2025). These positive emotional experiences further translate into platform stickiness, meaning that users tend to stay longer on the platform and browse more products rather than leaving immediately after completing a transaction (Chen & Lu, 2025). Through the creation of service encounters, users can experience products and services more directly, thereby improving consumer satisfaction.

In summary, e-commerce politeness enhances the interaction quality between users and platforms, enabling users to build emotional connections during the interaction process, generating stickiness, and ultimately transforming into consumer satisfaction. Therefore, this study focuses on examining how e-commerce politeness behaviors on social e-commerce platforms influence the satisfaction of pet owners during the process of purchasing pet products.

2.2 Furry Child Economy

The furry child economy is often regarded as a subfield of the broader pet economy, referring particularly to emotionally driven consumption scenarios centered on furry companion animals such as cats and dogs. In such scenarios, pets are emphasized as carriers of emotional value rather than ordinary biological entities (Holbrook & Woodside, 2008). At present, global demographic trends show significant aging and an increase in single-person households, leading to notable changes in lifestyle and an amplified emotional gap (Kretzler et al., 2022). This shift subsequently drives consumption upgrading, providing a solid social foundation for the development of the furry child economy.

Within this consumption context, greater emphasis is placed on the commercialization of emotional value and the segmentation of consumption scenarios. The personal emotional needs of pet owners combine with the emotional functions of furry children, forming a unique emotional connection between humans and animals, known as the Human-Animal Bond (Walsh, 2009). The family role of furry children shifts from "companions" to "family members" or "kin" (Hirschman, 1994). As the emotional status of furry children rises in the minds of their owners, pet owners tend to exhibit a stronger willingness to consume in commercialized contexts, such as purchasing pet food, medical services, and pet entertainment (Kirk, 2019). With the commercialization of emotional value,

consumption scenarios within the furry child economy show a trend of increasing segmentation. On social e-commerce platforms, users not only consume to meet pets' basic physiological needs but also to fulfill emotional connection needs between themselves and their furry children (Y. Liu et al., 2024), including but not limited to purchasing entertainment products (Boya et al., 2012), improving pets' quality of life (Y. Liu et al., 2024), and obtaining commemorative items (Spain et al., 2019). In addition, the commercialization of emotional value is amplified through new media content marketing, further influencing users' consumption decision-making paths (Feng, 2025).

In summary, the rise of the furry child economy is not only a result of demographic changes but also a concrete manifestation of the shift from basic consumption needs to emotional consumption needs. Its emotional function influences pet owners' perceptions of the family role of furry children, thereby driving purchasing decisions based on emotional value and forming a closed loop of emotional satisfaction throughout the purchasing process—from cognition to purchase and subsequent use.

2.3 Social E-commerce

Social e-commerce is widely recognized as a branch of electronic commerce (Baethge et al., 2016), arising from the deep integration of traditional e-commerce platforms and social media, and it provides new directions for academic research to explore issues from different perspectives such as information and content, business strategies, and human behavior (Curty & Zhang, 2011). The social e-commerce industry takes social e-commerce platforms as key points of interaction, connecting upstream suppliers, distributors, and users, thereby reducing communication costs and greatly improving transaction efficiency. Compared with the traditional e-commerce industry, in the social e-commerce industry, users, while acting as information receivers, also play a sharing role and are able to influence other users' purchasing decisions (Busalim et al., 2021). The social component of social e-commerce is thus established, and its community-based and interactive nature (Marmo, 2019) provides flexible space for the development of the furry child economy that relies on emotional attachment.

With the rapid growth of the furry child economy, social e-commerce platforms have become an important setting for its development. According to APPA's *2025 Industry Status Report*, the number of households with pets in the United States has reached 94 million, and Generation Z is currently the main driving force behind multi-pet ownership (Cleaver, 2025). The report indicates that the furry child economy within e-commerce platforms has a young and expansive market base. At the same time, social e-commerce platforms stimulate strong consumption demand for pet-related products through various marketing strategies (Feng, 2025).

In summary, social e-commerce integrates the efficient transaction capabilities of traditional e-commerce with the strong influence of social media, offering a new perspective for studying information flow, content marketing, and commercial behavior. The furry child economy gains stronger vitality through social e-commerce platforms. Therefore, analyzing the politeness behaviors in the pet product selling process on social e-commerce platforms based on e-commerce politeness, and examining factors influencing consumer satisfaction, contributes to the further development of the furry child economy.

Based on the above three aspects, it can be seen that e-commerce politeness reduces users' cognitive load by improving the quality of human–computer interaction, enhances user trust and emotional stickiness, and transforms their emotional factors into user satisfaction. As an emotion-driven consumption pattern, the furry child economy is a concrete manifestation of the expansion of emotional consumption demand and a major consumption hotspot among Generation Z. Social e-commerce platforms, through their strong capabilities in information flow, community interaction, and content marketing, have become key scenarios for the growth of the furry child economy. Therefore, this study takes e-commerce politeness as the entry point and uses AHP as the methodological guide to quantify the satisfaction of pet owners in the process of purchasing pet products on social e-commerce platforms, focusing on the impact generated across all stages of users' pet-product purchasing process.

3. MATERIALS AND METHODS

3.1 Research Design

3.1.1 Analytic Hierarchy Process

This study used the analytic hierarchy process as the primary research method to quantitatively assess consumer satisfaction in pet product transactions on social e-commerce platforms. AHP was a theoretical framework within the category of Multi-Criteria Decision-Making (MCDM) systems. It decomposed unstructured and complex problems into multiple hierarchical elements and compared the relative importance of indicators at each level, thereby transforming expert subjective judgments into objective quantitative weights (Saaty, 1990; Zavadskas et al., 2014). It demonstrated clear advantages in adapting to and flexibly applying multiple interrelated and potentially conflicting objectives.

The effective application of AHP relied on a rigorous process. First, a multi-level structural model was constructed. Then, the 1–9 scale method was used to quantify respondents' subjective opinions and form judgment matrices. By solving eigenvectors, local and global weights were calculated. Finally, a consistency test was conducted, with the consistency ratio (C.R.) typically required to be less than 0.1 to ensure internal logical coherence of the evaluation process (Mursalim & Mardainis, 2016).

3.1.2 Construction of the AHP Evaluation Index System

This study, based on the theoretical foundation of AHP, conducted an in-depth investigation into the issue of "the influencing factors of e-commerce politeness on user satisfaction in the process of purchasing pet products on social e-commerce platforms" by constructing a three-level hierarchical structural model.

Goal Level: To examine the influencing factors of e-commerce politeness on consumer satisfaction in the process of purchasing pet products on social e-commerce platforms.

As an important supporting component of the study, this paper, while retaining the basic dimensions of the traditional 5C model, took e-commerce politeness as the point of entry, constructed the social e-commerce context and the user perspective, and carried out an innovative reconstruction of its specific connotations. E-commerce politeness referred to users' experiential perceptions during Human-Computer Interaction, namely the overall feelings and interaction quality experienced by users during browsing, searching, purchasing, payment, and after-sales processes on electronic commerce platforms. The "polite software" theory suggested that software (i.e., platforms) should demonstrate respect toward users and ensure that information was transparent and easy to understand (Whitworth, 2005).

The complete process of purchasing pet products could be summarized as follows: forming an initial impression through information retrieval services (Rita et al., 2019), receiving purchasing services during the transaction (Parasuraman et al., 1985) and interacting with the payment environment (Talwar et al., 2020), followed by after-sales services after purchase and use (Aslam & Farhat, 2020), and finally engaging with the overall community environment (Martínez-López et al., 2021). These stages comprehensively cover all aspects of users' purchasing experiences on Social e-commerce platforms. Based on these considerations, this study established five core dimensions and their specific connotations, as shown in Table 1. This contextual reconstruction used the 5C model as the foundation for theoretical innovation, and its strong adaptability and inclusiveness allowed subsequent research to further refine indicator settings and deepen hierarchical analysis.

Alternative Level: To ensure the scientific rigor and reliability of the research results, this study further refined the first-level indicators in the criterion layer into quantifiable second-level indicators. The construction of the second-level indicators strictly followed the following principles: theoretical support—each second-level indicator was grounded in well-established theoretical foundations (such as Information Quality Theory, Perceived Risk Theory, and the Technology Acceptance Model), ensuring the validity of measurement; empirical evidence—nearly sixty relevant academic studies were extensively reviewed and synthesized to

provide solid scholarly support for each indicator; contextual relevance—all descriptions were developed specifically for the actual purchasing scenarios of pet products on Social e-commerce platforms and aligned with user consumption behavior.

Through this systematic construction process, the study ultimately developed five first-level indicators and twenty-five second-level indicators, forming a complete and detailed evaluation index system. The indicator descriptions, theoretical foundations, and literature support were presented in Tables 1–6.

Table 1. Overview of the 5C Dimensions

Dimension Code	Dimension Name	Core Connotation	Literature Support
C1	**Information Retrieval Services**	This refers to whether users experience smooth and user-friendly operations when browsing related products, viewing product details, switching pages, and performing similar actions on social e-commerce platforms; it also refers to the accuracy with which the platform's search results match users' needs during retrieval.	Rita et al., 2019; Nagpal & Petersen, 2021
C2	**Purchasing Services**	This refers to the services provided by merchants and the platform to support users in better purchasing and obtaining pet products during the buying process.	Parasuraman et al., 1985; To et al., 2024
C3	**Payment Environment**	This refers to the degree of user trust in factors such as security, smoothness, and stability of the payment environment when making payments for orders on social e-commerce platforms.	Talwar et al., 2020; Ganapathi, 2025
C4	**After-sales Services**	This refers to the convenient services provided by the platform or merchants after users purchase pet products, including returns and exchanges, repair and maintenance, and usage guidance.	Aslam & Farhat, 2020; Shokouhyar et al., 2020
C5	**Community Environment**	This refers to the discussion environment related to pet products on social e-commerce platforms that aligns with e-commerce politeness.	Martínez-López et al., 2021; Liao et al., 2023

Table 2. Details of Indicators under C1 Information Retrieval Services

Indicator Code	Indicator Name	Indicator Description	Theoretical Support	Literature Support
C1-1	**Advertising Information**	Refers to the quality, relevance, and timeliness of product promotions, brand publicity, and activity-related information pushed to users by social e-commerce platforms.	Information Quality Theory	Chen et al., 2023; Bleier & Eisenbeiss, 2015; Madnick et al., 2009
C1-2	**Personalized Recommendations**	Refers to the content proactively provided to users by social e-commerce platforms based on user profiling, targeting content that users may find interesting.	User Profiling Model	Chen et al., 2023; Bleier & Eisenbeiss, 2015; Salminen et al., 2022

C1-3	**Privacy Protection**	Refers to the measures taken by social e-commerce platforms—such as rules, technologies, management practices, and privacy settings—to ensure the security of users' personal information and related data.	Risk Perception Theory	Rita et al., 2019; Alzaidi et al., 2022; Slovic, 1987
C1-4	**Browsing Convenience**	Refers to whether users experience smooth and user-friendly operations when browsing related products, viewing product details, and switching pages within social e-commerce platforms.	Cognitive Load Theory	Rita et al., 2019; Alexander et al., 2021; Hanham et al., 2023
C1-5	**Search Accuracy**	Refers to the degree to which the platform's returned results match users' needs after users input search content.	Diffusion Theory	Nagpal & Petersen, 2021; Alexander et al., 2021; Larsen, 2023

Table 3. Details of Indicators under C2 Purchasing Services

Indicator Code	Indicator Name	Indicator Description	Theoretical Support	Literature Support
C2-1	**Product Information**	Refers to the clear, reliable, and easy-to-understand product details presented to users by merchants or platforms based on the pet products they sell.	Information Quality Theory	Madnick et al., 2009; To et al., 2024; Yogatama, 2023
C2-2	**Customer Service**	Refers to various forms of assistance and support provided to users by merchants or platforms, including human customer service and chatbot-based customer service.	Responsiveness and Assurance Theory in the SERVQUAL Model	Parasuraman et al., 2005; Abdullah et al., 2022; Chih et al., 2025
C2-3	**Logistics and Delivery Services**	Refers to the timeliness of product delivery, the integrity of packaging, and users' perceived attitude of delivery personnel during the distribution process.	Expectation Confirmation Theory	Hafez et al., 2021; Do et al., 2023; Raghavendra & Yashwini, 2025
C2-4	**Marketing Incentives**	Refers to actions taken by merchants or platforms to stimulate users' purchase intentions through emotional care or benefit-driven measures such as gifts, coupons, or reward points.	Motivation Theory	Barathi & Anitha, 2025; Kumar & Acharya, 2025; Olafsen et al., 2024
C2-5	**Order Management**	Refers to the platform's capability to handle the full process of users' pet product orders, specifically whether efficient, transparent, and reliable services are provided during order execution.	Service Quality Theory	Gali, 2025; Hakim & Hasin, 2025; Parasuraman et al., 1985

Table 4 Details of Indicators under C3 Payment Environment

Indicator Code	Indicator Name	Indicator Description	Theoretical Support	Literature Support
C3-1	**Smoothness of the Payment Process**	Refers to the number of clicks required, page loading time, coherence of step transitions, and whether any lag or error messages occur throughout the entire process from placing an order to completing payment.	Perceived Ease of Use in the Technology Acceptance Model	Ganapathi, 2025; Abidin, 2024; Huang & Yang, 2025
C3-2	**Recommended Purchase of Discounted Products**	Refers to the relevance and effectiveness of discounted product recommendations displayed to users by social e-commerce platforms during the payment stage.	Consumer Value Theory	Song et al., 2022; Sheth et al., 1991
C3-3	**Convenience of Information Entry**	Refers to the convenient services provided on the checkout page, such as auto-fill and saved history, for required fields including delivery address, contact information, and invoice details.	Perceived Ease of Use in the Technology Acceptance Model	Rajamma et al., 2009; Abidin, 2024; Huang & Yang, 2025
C3-4	**Diversity of Payment Methods**	Refers to the coverage of available payment channels offered by the platform for users to freely choose, including bank cards, third-party payment, mobile payment, installment options, and e-wallets.	Choice Architecture Theory	Dusad, 2025; Rahmawati, 2022
C3-5	**Perceived Payment Security**	Refers to users' perceived level of security and trust regarding measures such as information encryption, identity verification, and risk alerts during the payment process.	Perceived Risk Theory	Liao et al., 2011; Slovic, 1987

Table 5. Details of Indicators under C4 After-sales Services

Indicator Code	Indicator Name	Indicator Description	Theoretical Support	Literature Support
C4-1	**Return and Exchange Policy**	Refers to the institutional arrangements established by the platform regarding returns, exchanges, refund timeliness, cost responsibility, and the simplicity of procedures after users purchase pet products.	Service Quality Theory	Church et al., 2024; Wu et al., 2024; Parasuraman et al., 1985
C4-2	**Maintenance Services**	Refers to the platform's capability to provide after-sales repair, regular maintenance, and replacement of related accessories for the pet products purchased by users on social e-commerce platforms.	Service Quality Theory	Shokouhyar et al., 2020; Susilo & Ikhsan, 2020; Parasuraman et al., 1985
C4-3	**Usage Guidelines**	Refers to the guidance provided to users to reduce learning costs after obtaining pet products.	Expectation Confirmation Theory	Seo & Bae, 2023; Raghavendra & Yashwini, 2025

C4-4	**Online Dispute Resolution**	Refers to the platform's ability to promptly and accurately accept, investigate, adjudicate, and provide feedback on disputes arising between users and merchants.	Service Quality Theory	Liu & Wan, 2023; Obi-Farinde, & Philippe, 2021; Parasuraman et al., 1985
C4-5	**Visualization of After-sales Progress**	Refers to the platform's ability to present the current status of each stage in a real-time, visualized manner after users submit an after-sales request.	Service Quality Theory	Tang et al., 2022; Parasuraman et al., 1985

Table 6. Details of Indicators under C5 Community Environment

Indicator Code	Indicator Name	Indicator Description	Theoretical Support	Literature Support
C5-1	**Quality of the Comment Section**	Refers to the feedback from other users displayed on the product detail page, which is usually more concise and direct in content.	Signaling Theory	Kaur et al., 2022; Chen et al., 2022; Z. Liu et al., 2024
C5-2	**Depth of Content Discussion**	Refers to text-and-image or audiovisual reviews related to the product within the platform beyond the basic comment section, including horizontal and vertical product comparisons, professional explanations, educational content, and users' recorded usage experiences.	Information Richness Theory	Li et al., 2025; Chen et al., 2022; X. Liu et al., 2024
C5-3	**Community Atmosphere**	Refers to the overall environment of the community associated with the product, and the level of comfort users feel when participating in related community activities or posting content.	Affective Socialization Theory	Li et al., 2025; Martínez-López et al.; Isabella & Carvalho, 2016
C5-4	**Influencer Reviews**	Refers to evaluations and tests conducted by key opinion leaders and key consumers—such as online influencers, bloggers, and content creators, which can expand product influence, provide behavioral reference for ordinary users, and affect their purchase intentions.	Reference Group Theory	Harris & Dennis, 2011; Makhetha-Kosi et al., 2025
C5-5	**Sense of Group Identity**	Refers to the identity recognition and sense of belonging users gain after categorizing themselves into a certain group on social e-commerce platforms. Users often actively maintain shared group characteristics, contributing to value co-creation.	Social Identity Theory	Li et al., 2025; Liao et al., 2023; Shen & Zhang, 2024

Subsequently, pairwise comparison questionnaires were used to obtain data and to calculate the relative weights of elements at each level on the basis of the constructed hierarchical model. Based on the 5C theory, this study constructed an influencing-factor system of e-commerce politeness on user satisfaction in the process of purchasing pet products on social e-commerce platforms, as shown in Figure 1.



Figure 1. Influencing Factor System of Consumer Satisfaction in Purchasing Pet Products on Social E-commerce Platforms

3.2 Questionnaire Data Collection

In order to collect data more efficiently, this study carried out online questionnaire data collection. During the questionnaire design stage, to ensure the usability and accuracy of the data, the design of the questionnaire strictly followed the theoretical basis of AHP and was implemented in accordance with its specific application guidelines, thereby ensuring the completeness of the measurement dimensions and the reliability of the collected data.

The questionnaire was administered through the Wenjuanxing online survey platform, and the data collection period was from December 29, 2025 to January 1, 2026, yielding a total of 162 questionnaires. The researchers screened respondents by setting pre-questions and selected users who had purchased pet products on social e-commerce platforms as the survey subjects for this study, excluding 42 invalid questionnaires and obtaining 120 valid questionnaires.

The core AHP procedure in this study included 60 pairwise comparisons, and the ratio between the valid sample size (N = 120) and the number of items was 2:1, which met the practical sample size requirements of the AHP research method and was sufficient to ensure the stability and reliability of the data and results (Ho & Ma, 2018). All participants in this study completed the survey after providing informed consent regarding relevant personal information.

4. RESULTS AND DISCUSSION

4.1 Sample Analysis

This study collects a total of 120 valid questionnaires. Among them, 63 respondents are male, accounting for approximately 52.5%, and 57 respondents are female, accounting for approximately 47.5%, showing a relatively balanced gender distribution. In terms of age, 9 respondents are 18 years old or below, accounting for 7.5%. A total of 56 respondents are aged 19 to 25, accounting for approximately 46.7%. A total of 30 respondents are aged 26 to 35, accounting for approximately 25.0%. A total of 14 respondents are aged 36 to 45, accounting for approximately 11.6%. A total of 5 respondents are aged 46 to 55, accounting for approximately 4.2%. A total of 6 respondents are aged 55 or above, accounting for approximately 5.0%.

Regarding educational attainment, 8 respondents have a high school education or below, accounting for approximately 6.7%. A total of 23 respondents have a junior college degree, accounting for approximately 19.2%. A total of 70 respondents have a bachelor's degree, accounting for approximately 58.3%. A total of 19 respondents have a master's degree or above, accounting for approximately 15.8%.

Regarding monthly disposable income, defined as income freely allocated after deducting mandatory expenses such as medical insurance, social security, taxes, and rent, 27 respondents fall at 1500 yuan or below, accounting for approximately 22.5%. A total of 40 respondents fall between 1501–3000 yuan, accounting for approximately 33.3%. A total of 31 respondents fall between 3001–5000 yuan, accounting for approximately 25.8%. A total of 22 respondents fall at 5001 yuan or above, accounting for approximately 18.3%.

Regarding pet ownership, 1 respondent keeps a hamster, accounting for approximately 0.8%. A total of 50 respondents keep cats, accounting for approximately 41.7%. A total of 40 respondents keep dogs, accounting for approximately 33.3%. A total of 29 respondents do not keep pets but have purchased pet products on social e-commerce platforms for humanitarian aid to stray animals, accounting for approximately 24.2%.

In summary, the valid questionnaires collected in this study show a relatively balanced gender distribution. The respondents are mainly aged 19 to 35, representing Generation Z. The overall education level is relatively high. Monthly disposable income is distributed evenly across different levels, with representation in each category.

4.2 Weight Calculation and Consistency Testing

This study aims to quantify users' subjective evaluations on social e-commerce platforms into weights by applying the mathematical modeling techniques of the analytic hierarchy process. Through the construction of judgment matrices, the computation of eigenvectors, and the execution of consistency testing procedures, scientifically grounded and highly reliable weights are obtained. The technical principles and operational steps of AHP are as follows.

(1) Calculation of the weight vector: The geometric mean method is used to calculate the relative weight of each indicator. First, the geometric mean of the elements in each row of the judgment matrix is computed:

$$w_i = \left(\prod_{j=1}^{n} a_{ij}\right)^{\frac{1}{n}} / \sum_{i=1}^{n} a_{ij}\left(\prod_{j=1}^{n} a_{ij}\right)^{\frac{1}{n}} \quad \text{(Formulas 1)}$$

Here, a_{ij}represents the relative importance scale of indicator $i$compared with indicator j, and matrix Asatisfies the reciprocal property $a_{ij} = 1/a_{ji}$.

(2) Calculation of the maximum eigenvalue λmax:

$$\lambda_{\max} = \frac{1}{n}\left(\frac{w'_1}{w_1} + \frac{w'_2}{w_2} + \cdots + \frac{w'_n}{w_n}\right) \text{(Formulas 2)}$$

To test the consistency of the judgment matrix, the maximum eigenvalue λmax is calculated. w'ᵢ represents the i-th component of the vector w'.

$$\begin{bmatrix} 1 & A_{12} & \cdots & A_{1n} \\ 1/A_{12} & 1 & \cdots & A_{2n} \\ \vdots & \vdots & \ddots & \vdots \\ 1/A_{1n} & 1/A_{2n} & \cdots & 1 \end{bmatrix} \cdot \begin{bmatrix} w_1 \\ w_2 \\ \vdots \\ w_3 \end{bmatrix} = \begin{bmatrix} w'_1 \\ w'_2 \\ \vdots \\ w'_3 \end{bmatrix} \text{ (Formulas 3)}$$

(3) Consistency testing: To ensure the logical consistency of the decision makers' judgments, a consistency test is conducted. First, the Consistency Index C.I. is calculated.

$$\text{C.I} = \frac{\lambda_{\max} - \text{n}}{\text{n} - 1} \text{ (Formulas 4)}$$

Next, the average Random Index R.I. is obtained from Table 7, as proposed by Saaty in 1990.

Table 7. Standard values of the average Random Index R.I.

Order of the Matrix (n)	1	2	3	4	5	6	7	8	9
R.I.	0.00	0.00	0.58	0.90	1.12	1.24	1.32	1.41	1.45

Finally, the Consistency Ratio C.R. is calculated.

$$\text{C.R.} = \frac{\text{C.I}}{\text{R.I}} \text{ (Formulas 5)}$$

According to Saaty's consistency evaluation criterion, when the consistency ratio (CR) of a judgment matrix exceeds 0.10, the initial matrix requires revision and optimization; when the CR falls below 0.10, the matrix is considered sufficiently reliable, and the weight vector can be extracted.

4.3 Consistency Test Analysis

To evaluate the consistency of the judgment matrices, this study follows the method proposed by Saaty in 1990 and uses the Consistency Ratio CR as the main evaluation indicator. This indicator is used to determine whether a matrix meets the required standard of CR < 0.1. If the value exceeds this threshold, the structure or data of the matrix needs to be adjusted. The calculation results show that the CR values of all levels in this study, including the criterion level and the five alternative levels, are all below 0.1, indicating that all judgment matrices pass the consistency test and that the level of error remains within an acceptable range.

Based on the above theoretical foundation, this study uses AHP to construct the model and calculates the eigenvectors, or weights, of the indicators at each level to identify the key factors influencing consumer satisfaction in Social e-commerce scenarios. Table 8 presents the weight distribution of the first-level indicators in the criterion layer. Table 9 presents the specific weight data of the second-level indicators under the alternative layer for information retrieval services. Table 10 presents the validity statistics of the six matrices.

Table 8. Judgment Weights of First-Level Indicators in the Criterion Layer

	Information Retrieval Services	Purchasing Services	After-sales Services	Payment Environment	Community Environment	Weight

Information Retrieval Services	1.0000	1.6984	0.7662	2.3121	2.0239	0.2764
Purchasing Services	0.5888	1.0000	1.6528	2.0430	2.0878	0.2560
After-sales Services	1.3051	0.6050	1.0000	0.7972	0.8745	0.1709
Payment Environment	0.4325	0.4895	1.2544	1.0000	1.4616	0.1594
Community Environment	0.4941	0.4790	1.1436	0.6842	1.0000	0.1374

Table 9. Judgment Matrix of Second-Level Indicators in the Alternative Layer (Information Retrieval Services)

	Privacy Protection	Personalized Recommendations	Advertising Information	Search Accuracy	Browsing Convenience	**Weight**
Privacy Protection	1.0000	1.0163	1.4534	1.9912	1.9877	0.2769
Personalized Recommendations	0.9839	1.0000	0.7926	1.5826	1.5355	0.2211
Advertising Information	0.6880	1.2617	1.0000	1.1320	1.1199	0.1983
Search Accuracy	0.5022	0.6319	0.8930	1.0000	1.4401	0.1623
Browsing Convenience	0.5031	0.6512	0.8930	0.6944	1.0000	0.1414

Table 10. Validity Statistics of the Matrices

Indicator Level	**Indicator Name**	**Maximum Eigenvalue**	**CI (Consistency Index)**	**C.R (Consistency Ratio)**
First-Level Indicators	5C	5.2450	0.0613	0.0547
Second-Level Indicators	C1 Information Retrieval Services	5.0637	0.0159	0.0142
Second-Level Indicators	C2 Purchasing Services	5.1290	0.0323	0.0288
Second-Level Indicators	C3 Payment Environment	5.4203	0.1051	0.0938
Second-Level Indicators	C4 After-sales Services	5.1033	0.0258	0.0231
Second-Level Indicators	C5 Community Environment	5.3205	0.0801	0.0715

Based on the AHP weight assignment and consistency testing, the analytical structure of user satisfaction factors in the process of purchasing pet products on social e-commerce platforms in this study could be summarized as follows. The weight distribution of each evaluation dimension showed a clear hierarchical pattern. According to the importance of the core indicators and the magnitude

of their assigned weights, a decreasing sequence was obtained: Information Retrieval Services (0.2764) > Purchasing Services (0.2560) > After-sales Services (0.1709) > Payment Environment (0.1594) > Community Environment (0.1374). This weight distribution indicated users' value preferences and priority order throughout the entire process of purchasing pet products in social e-commerce scenarios.

This study focused on information retrieval services, which mainly originated from the pre-purchase screening stage. In this context, users of social e-commerce platforms placed greater emphasis on the process of obtaining information. The importance weights of the second-level indicators were ranked from highest to lowest as follows: Privacy Protection (0.2769) > Personalized Recommendations (0.2211) > Advertising Information (0.1983) > Search Accuracy (0.1623) > Browsing Convenience (0.1414). The dimensions of purchasing services and payment environment reflected the stages in which users formally purchased specific pet products. In the purchasing services dimension, Product Information (0.3178) and Customer Service (0.2586) had the highest weights. In the payment environment dimension, Smoothness of the Payment Process (0.2473), Recommended Purchase of Discounted Products (0.2401), and Perceived Payment Security (0.2193) accounted for the highest and relatively similar proportions. The after-sales services dimension reflected the protective services provided by merchants or platforms after users purchased pet products. Among these factors, the Return and Exchange Policy (0.3400) had significantly higher importance than the others. Maintenance Services (0.2361) also showed a relatively high weight. The community environment dimension represented the overall content related to pet products on social e-commerce platforms. Within this dimension, the Quality of the Comment Section (0.3344) and the Depth of Content Discussion (0.2490) held the highest weights, while Influencer Reviews (0.0915), which typically accounted for a large proportion of advertising exposure on social e-commerce platforms, had the lowest weight.

In conclusion, users of social e-commerce platforms placed the greatest emphasis on the pre-purchase screening stage when purchasing pet products, namely information retrieval services, especially privacy protection. At the same time, users had high expectations for product information in both purchasing services and after-sales services, while the weights of factors within the payment environment were relatively similar. In the community environment dimension, the quality of the comment section had the highest weight, whereas influencer reviews had the lowest. Therefore, this study used AHP to reveal users' value preferences and priority order throughout the entire process of purchasing pet products in social e-commerce scenarios, identifying key factors and providing a theoretical basis for subsequent recommendations.

5. CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

This study integrates the traditional 5C model with the specific application context of social e-commerce to explore the factors influencing consumer satisfaction throughout the entire process of purchasing pet products. Through the use of AHP to quantify decision preferences, and based on empirical data analysis and validation, several key conclusions are drawn.

Unlike traditional E-commerce perceptions, although services during and after the purchase process are important in each stage of users' pet product purchases on social e-commerce platforms, users place greater emphasis on information screening before making a purchase. In the pre-purchase screening stage, privacy protection is the most important factor influencing consumer satisfaction. personalized recommendations also exert a significant impact, indicating that users have strong expectations regarding privacy protection, and that the quality of personalized content directly affects users' emotional responses.

In the stage where users formally purchase specific pet products, product information and customer service under the purchasing services dimension have the greatest impact on consumer satisfaction. This indicates that users have clear expectations regarding product details and the supportive services provided by merchants and platforms. In the payment environment dimension,

smoothness of the payment process, recommended purchase of discounted products, and perceived payment security account for the highest and relatively similar proportions, suggesting that users' expectations for the payment environment are balanced and comprehensive. To improve satisfaction in this dimension, enhancements must be made holistically across all elements of the payment process.

After users purchase specific pet products, the return and exchange policy and maintenance services under the after-sales services dimension hold the highest weights, confirming users' concerns regarding product returns, exchanges, and repair handling. In the overall content related to pet products, the quality of the comment section and the depth of content discussion under the community environment dimension hold the highest weights, while influencer reviews hold the lowest. This indicates that advertising strategies for pet products on social e-commerce platforms should not rely solely on the "celebrity effect" of influencers. Instead, platforms should guide public opinion in the comment section, encourage in-depth reviews, and highlight both functional and emotional aspects of products to build user trust and enhance consumer satisfaction.

5.2 Recommendations

Guided by the concept of e-commerce politeness, this study draws on the research findings to identify the strengths and weaknesses of current social e-commerce platforms and transforms theoretical insights into actionable improvement measures. From the perspectives of both platforms and merchants, targeted and practical recommendations are proposed to achieve an overall enhancement of e-commerce politeness on Social e-commerce platforms and to improve consumer satisfaction.

Researchers recommend that social e-commerce platforms pay attention to the development of the furry child economy and increase their focus on the information screening stage before users make a purchase. The findings show that privacy protection is an important factor influencing consumer satisfaction. Therefore, strengthening privacy protection mechanisms and optimizing personalized recommendations are of great significance for the development of social e-commerce platforms. Platforms may enhance users' sense of security and trust by providing clear privacy-setting pathways and options and by notifying users about the collection of sensitive information, thereby improving satisfaction during use. At the same time, simplifying privacy policy statements through concise summaries or adding explanatory functions can reduce users' comprehension costs.

The findings also indicate that personalized recommendations have a substantial impact on consumer satisfaction. Platforms may increase investment in intelligent recommendation systems, develop more complete and detailed user profiles, proactively deliver high-quality and in-depth content, and reduce recommendations that violate social norms. These measures can effectively enhance users' acceptance of personalized recommendation functions. In addition, platforms may develop preference-adjustment features that categorize and visualize user profiles, allowing users to actively select their preferred content types and recommendation frequency.

In the payment environment dimension, platforms should adopt a holistic approach to improving all elements of the payment process and pursue a balance among smoothness, security, and intelligent recommendations. Reducing unnecessary payment steps, simplifying the payment interface, and highlighting key information can improve payment efficiency. Recommending discounted products that are highly relevant to the pet products users intend to purchase and offering different bundled purchase options can provide convenience while increasing sales volume.

Furthermore, researchers suggest that merchants focus on the presentation and detail display of product images, highlight users' interests and pain points, emphasize product advantages, and provide more comprehensive product information to support multi-angle decision-making. Merchants should also manage public opinion in the comment section appropriately and encourage users to leave in-depth reviews through incentives such as discounts. Brand advertising may emphasize both functional and emotional aspects of products to meet users' emotional needs and enhance the emotional fit between products and users. At the same time,

merchants should clearly communicate Return and Exchange Policies and make them visible, such as indicating "pet food cannot be returned once opened" or "return shipping costs are covered by the merchant" on the product page. Making the process transparent, such as allowing users to see real-time updates like "merchant has received the item," "quality inspection in progress," or "refund being processed," can effectively reduce user anxiety and improve consumer satisfaction.

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REFERENCES

1) Abdullah, M. F., Khan, N. R. M., & Ibrahim, M. A. (2022). Exploring the Influence of SERVQUAL Dimensions of Reliability, Responsiveness and Assurance towards Consumers Loyalty: The Mediating Effect of Commitment-Trust Relationship Marketing Theory. *International Journal of Academic Research in Business and Social Sciences, 12*(11), 1499–1509. http://dx.doi.org/10.6007/IJARBSS/v12-i11/15058
2) Abidin, Z. (2024). The effect of perceived usefulness, perceived ease of use, and lifestyle on purchase intention. *Journal of Management and Business Insight, 2*(1), 62-70. https://doi.org/10.12928/jombi.v2i1.935
3) Alexander, R., Thompson, N., McGill, T., & Murray, D. (2021). The Influence of User Culture on Website Usability. *International Journal of Human-Computer Studies*, *154*, 102688. https://doi.org/10.1016/j.ijhcs.2021.102688
4) Al-Khatib, M. A. (2021). (Im) politeness in Intercultural Email Communication between People of Different Cultural Backgrounds: A Case Study of Jordan and the USA. *Journal of Intercultural Communication Research*, *50*(4), 409–430. https://doi.org/10.1080/17475759.2021.1913213
5) Alzaidi, M. S., & Agag, G. (2022). The role of trust and privacy concerns in using social media for e-retail services: The moderating role of COVID-19. *Journal of Retailing and Consumer Services*, *68*, 103042. https://doi.org/10.1016/j.jretconser.2022.103042
6) Aslam, W., & Farhat, K. (2020). Impact of After-Sales Service on Consumer Behavioural Intentions. *International Journal of Business and Social Research, 10*(4), 25-38, https://doi.org/10.1504/ijbsr.2020.10025843
7) Baethge, C., Klier, J. & Klier, M. (2016). Social commerce—state-of-the-art and future research directions. *Electron Markets*, *26*(3), 269–290. https://doi.org/10.1007/s12525-016-0225-2
8) Barathi, T. & Anitha T. (2025). An Exploratory Study on Consumer Buying Behaviour Towards Online Shopping. *Advanced International Journal for Research, 6*(4), 1144. https://doi.org/10.63363/aijfr.2025.v06i04.1144
9) Bardhi, F., & Eckhardt, G. M. (2012). Access-based consumption: The case of car sharing. *Journal of Consumer Research, 39*(4), 881-898. https://doi.org/10.1086/666376
10) Bleier, A., & Eisenbeiss, M. (2015). Personalized Online Advertising Effectiveness: The Interplay of What, When, and Where. *Marketing Science*, *34*(5), 669–688. https://doi.org/10.1287/mksc.2015.0930
11) Boya, U., Dotson, M. & Hyatt, E. (2012). Dimensions of the dog–human relationship: A segmentation approach. *Journal of Targeting, Measurement and Analysis for Marketing, 20*(2), 133–143. https://doi.org/10.1057/jt.2012.8
12) Busalim, A. H., Ghabban, F., & Che Hussin, A. R. (2021). Customer engagement behaviour on social commerce platforms: An empirical study. *Technology in Society*, *64*, 101437. https://doi.org/10.1016/j.techsoc.2020.101437

13) Chen, I. C., & Huang, J. T. (2025). Research on the service quality of E-commerce platforms—from the perspective of politeness framework. *International Journal of Multidisciplinary Research and Growth Evaluation*, *6*(1), 286–291. https://doi.org/10.54660/.IJMRGE.2025.6.1.286-291

14) Chen, I.-C., & Lu, J. (2025). Exploring User Experience Perceptions of Logistics E-commerce Platforms from the Perspective of E-commerce Politeness. *International Journal of Social Science and Economics Invention*, *11*(04), 90-96. https://doi.org/10.23958/ijssei/vol11-i04/393

15) Chen, I. C., & Zhang, Z. L. (2025). Research on Customer Satisfaction with E-commerce Online Customer Service Quality. *Academic Journal of Humanities & Social Sciences*, *8*(1), 77–82. https://doi.org/10.25236/AJHSS.2025.080113

16) Chen, S., Wu, Y., Deng, F., & Zhi, K. (2023). How does ad relevance affect consumers' attitudes toward personalized advertisements and social media platforms? The role of information co-ownership, vulnerability, and privacy cynicism. *Journal of Retailing and Consumer Services*, *73*, 103336. https://doi.org/10.1016/j.jretconser.2023.103336

17) Chen, T., Samaranayake, P., Cen, X., Qi, M., & Lan, Y. C. (2022). The Impact of Online Reviews on Consumers' Purchasing Decisions: Evidence From an Eye-Tracking Study. *Frontiers in Psychology*, *13*, 865702. https://doi.org/10.3389/fpsyg.2022.865702

18) Chih, W. H., Wang, K. Y., & Banda, H. W. (2025). Chatbots at the frontline: Unveiling antecedents of customers' willingness to accept chatbot intervention in service recovery. *Journal of Retailing and Consumer Services*, *84*, 104254. https://doi.org/10.1016/j.jretconser.2025.104254

19) Church, E. M., DaSouza, R. O., & Awe, O. A. (2024). Examining the Antecedents of Return Policy Leniency in eCommerce. *Journal of Electronic Commerce in Organizations, 22*(1), 1-19. https://doi.org/10.4018/JECO.337362

20) Cleaver, L. (2025, March 27). *Report: Pet ownership expands as Gen Z shifts trends. Petfood Industry.* https://www.petfoodindustry.com/pet-food-market/market-trends-and-reports/news/15741428/report-pet-ownership-expands-as-gen-z-shifts-trends

21) Curty, R.G. & Zhang, P. (2011), Social commerce: Looking back and forward. *Proceedings of the Association for Information Science and Technology*, *48*(1), 1-10. https://doi.org/10.1002/meet.2011.14504801096

22) Do, Q. H., Kim, T. Y., & Wang, X. (2023). Effects of logistics service quality and price fairness on customer repurchase intention: The moderating role of cross-border e-commerce experiences. *Journal of Retailing and Consumer Services*, *70*, 103165. https://doi.org/10.1016/j.jretconser.2022.103165

23) Dusad, K. (2025). Payment Method Heterogeneity in E-commerce: Architectural Solutions for APM Integration Challenges. *Journal of Information Systems Engineering and Management, 10*(61s), 1164-1171. https://doi.org/10.52783/jisem.v10i61s.13515

24) Feng, X. (2025). Study on the Innovative Marketing Path of China's Pet Economy under the New Media Environment. *Management*, *8*(1), 108-115. https://doi.org/10.31058/j.mana.2025.81014

25) Gali, H. R. (2025). Understanding Order Management Systems in Retail and E-Commerce. *Journal of Information Systems Engineering and Management, 10*(59s), 1066-1077. https://doi.org/10.52783/jisem.v10i59s.12997

26) Ganapathi, J. K. (2025). Secure Commerce Framework: The Convergence of Tokenization and Unified Checkout in Digital Payments. *Journal of Information Systems Engineering and Management, 10*(58s), 586–597. https://doi.org/10.52783/jisem.v10i58s.12637

27) Hafez, L., Elakkad, E. & Gamil, M. (2021) A Study on the Impact of Logistics Service Quality on the Satisfaction and Loyalty of E-Shoppers in Egypt. *Open Journal of Business and Management, 9*(5), 2464-2478.

https://doi.org/10.4236/ojbm.2021.95133

28) Hakim, M. F. L. & Hasin, A. (2025). The Influence of Operational Planning, Control and Supervision on E-Commerce Order Management Performance in MSMEs in Yogyakarta. *Formosa Journal of Multidisciplinary Research, 4*(9), 4539-4556. https://doi.org/10.55927/fjmr.v4i9.489
29) Hanham, J., Castro-Alonso, J., C. & Chen, O. (2023). Integrating cognitive load theory with other theories, within and beyond educational psychology. *British Journal of Educational Psychology, 93*(2), 239-250. https://doi.org/10.1111/bjep.12612
30) Harris, L. & Dennis, C. (2011), Engaging customers on Facebook: Challenges for e-retailers. *Journal of Consumer Behaviour, 10*(6), 338-346. https://doi.org/10.1002/cb.375
31) Hirschman, E. C. (1994). Consumers and Their Animal Companions. *Journal of Consumer Research*, *20*(4), 616–632. https://doi.org/10.1086/209374
32) Ho, W., & Ma, X. (2018). The state-of-the-art integrations and applications of the analytic hierarchy process. *European Journal of Operational Research, 267*(2), 399–414. https://doi.org/10.1016/j.ejor.2017.09.007
33) Holbrook, M. B., & Woodside, A. G. (2008). Animal companions, consumption experiences, and the marketing of pets: Transcending boundaries in the animal–human distinction. *Journal of Business Research*, *61*(5), 377–381. https://doi.org/10.1016/j.jbusres.2007.06.024
34) Huang, B. & Yang, Y. (2025). Revisiting the Technology Acceptance Models: A Critical Evaluation and Their Educational Applications. *Asian Journal of Education and Social Studies*, 51 (3), 80–91. https://doi.org/10.9734/ajess/2025/v51i31810
35) Isabella, G., & Carvalho, H. C. (2016). Chapter 4—Emotional Contagion and Socialization: Reflection on Virtual Interaction. In S. Y. Tettegah & D. L. Espelage (Eds), *Emotions, Technology, and Behaviors* (pp. 63–82). Academic Press. https://doi.org/10.1016/B978-0-12-801873-6.00004-2
36) Kaur, K., Suppiah, PC, Arumugam, N., & Idham, M. (2022). Politeness and Negotiation Strategies in Handling Customers: Conflict-Resolution. *International Journal of Academic Research in Business and Social Sciences, 12*(8), 957 – 971. http://dx.doi.org/10.6007/IJARBSS/v12-i8/14669
37) Kirk, C. P. (2019). Dogs have masters, cats have staff: Consumers' psychological ownership and their economic valuation of pets. *Journal of Business Research*, *99*, 306–318. https://doi.org/10.1016/j.jbusres.2019.02.057
38) Kretzler, B., König, H. H., & Hajek, A. (2022). Pet ownership, loneliness, and social isolation: a systematic review. *Social Psychiatry and Psychiatric Epidemiology*, *57*(10), 1935–1957. https://doi.org/10.1007/s00127-022-02332-9
39) Kumar, M. & Acharya, S. (2025). Unveiling consumer preferences: evaluating the impact of rating, discount, and deal proneness on purchasing intention. *J Revenue Pricing Manag, 24*(5), 439–448. https://doi.org/10.1057/s41272-024-00510-9
40) Larsen, M. (2023). Adding 'origination' to diffusion theory: contrasting the roles of China and the EU in green finance. *Review of International Political Economy, 30*(4), 1203–1219. https://doi.org/10.1080/09692290.2023.2204532
41) Li, W., Cujilema, S., Hu, L., & Xie, G. (2025). How Social Scene Characteristics Affect Customers' Purchase Intention: The Role of Trust and Privacy Concerns in Live Streaming Commerce. *Journal of Theoretical and Applied Electronic Commerce Research, 20*(2), 85. https://doi.org/10.3390/jtaer20020085
42) Liao, C., Liu, C. C., & Chen, K. (2011). Examining the impact of privacy, trust and risk perceptions beyond monetary transactions: An integrated model. *Electronic Commerce Research and Applications, 10*(6), 702–715. https://doi.org/10.1016/j.elerap.2011.07.003

43) Liao, J., Pang, J., & Dong, X. (2023). More gain, more give? The impact of brand community value on users' value co-creation. *Journal of Retailing and Consumer Services*, *74*, 103389. https://doi.org/10.1016/j.jretconser.2023.103389

44) Liu, X., Lin, J., Jiang, X., Chang, T., & Lin, H. (2024). eWOM Information Richness and Online User Review Behavior: Evidence from TripAdvisor. *Journal of Theoretical and Applied Electronic Commerce Research, 19*(2), 880-898. https://doi.org/10.3390/jtaer19020046

45) Liu, Y., Chang, X., Yang, S., Li, Z., & Wu, Y. (2024). "Pets make you spend more!" Impact of pet ownership on consumer purchase decisions. *Journal of Business Research*, *183*, 114838. https://doi.org/10.1016/j.jbusres.2024.114838

46) Liu, Y., & Wan, Y. (2023). Consumer Satisfaction with the Online Dispute Resolution on a Second-Hand Goods-Trading Platform. *Sustainability, 15*(4), 3182. https://doi.org/10.3390/su15043182

47) Liu, Z., Du, Y., & Pennings, E. (2024). Open knowledge disclosure and firm value: a signalling theory perspective. *Industry and Innovation, 31*(4), 475–500. https://doi.org/10.1080/13662716.2024.2320765

48) Madnick, S., Wang, R., Lee, Y., & Zhu, H. (2009). Overview and Framework for Data and Information Quality Research. *Journal of Data and Information Quality, 1*(1), 1-22. https://doi.org/10.1145/1515693.1516680

49) Makhetha-Kosi, P., Matlala, N., Shumba, K., & Shambare, R. (2025). Social Media, Reference Groups, and Their Brands. In A. Gbadamosi (Ed.), *Brands, Branding, and Consumerism: Personal and Social Influences on Consumption* (pp. 149–181). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-80859-3_4

50) Marmo, R. (2019). Social commerce using social network and e-commerce. In M. Khosrow-Pour (Ed.), *Advanced Methodologies and Technologies in Digital Marketing and Entrepreneurship* (pp. 327–338). IGI Global. https://doi.org/10.4018/978-1-5225-7766-9.ch026

51) Martínez-López, F. J., Aguilar-Illescas, R., Molinillo, S., Anaya-Sánchez, R., Coca-Stefaniak, J. A., & Esteban-Millat, I. (2021). The Role of Online Brand Community Engagement on the Consumer–Brand Relationship. *Sustainability, 13*(7), 3679. https://doi.org/10.3390/su13073679

52) Molinillo, S., Aguilar-Illescas, R., Anaya-Sánchez, R., & Liébana-Cabanillas, F. (2021). Social commerce website design, perceived value and loyalty behavior intentions: The moderating roles of gender, age and frequency of use. *Journal of Retailing and Consumer Services, 63*, 102404. https://doi.org/10.1016/j.jretconser.2020.102404

53) Mursalim, M., & Mardainis, M. (2016). Penerapan Metode AHP Dan TOPSIS Untuk Mengevaluasi Pemohon Kredit Suku Cadang Motor Suzuki (Studi Kasus: PT. Riau Jaya Cemerlang Pekanbaru). Digital Zone: *Jurnal Teknologi Informasi dan Komunikasi, 7*(2), 115-128. https://doi.org/10.31849/digitalzone.v7i2.603

54) Nagpal, M., & Petersen, J. A. (2021). Keyword Selection Strategies in Search Engine Optimization: How Relevant is Relevance? *Journal of Retailing*, *97*(4), 746–763. https://doi.org/10.1016/j.jretai.2020.12.002

55) Obi-Farinde, M., & Philippe, M. (2021). ODR – A Solution for Consumer Disputes and Cross-Border E-Commerce Disputes. *BCDR International Arbitration Review, 8*(1), 47–64. https://doi.org/10.54648/bcdr2021028

56) Olafsen, A. H., Jauvin, F., Cécire, P., & Forest, J. (2024). Money talks? The motivational mechanisms of base pay on well-being and work performance. *Scandinavian Journal of Psychology, 65*(6), 1027–1038. https://doi.org/10.1111/sjop.13033

57) Parasuraman, A., Zeithaml, V. A., & Malhotra, A. (2005). E-S-QUAL: A multiple-item scale for assessing electronic service quality. *Journal of Service Research, 7*(3), 213-233. https://doi.org/10.1177/1094670504271156

58) Parasuraman, A., Zeithaml, V. A., Berry, L. L. (1985). A Conceptual Model of Service Quality and Its Implications for Future Research. *Journal of Marketing, 49*(4), 41-50. https://doi.org/10.1177/002224298504900403

59) Raghavendra & Yashwini (2025). Future Research Directions for Expectation Confirmation Theory in Cross-Cultural and

Emerging Digital Environments. *Asian Review of Social Sciences, 14*(1), 14-20. https://doi.org/10.70112/arss-2025.14.1.4288

60) Rahmawati, T. (2022). Nudge on Choice Architecture: Effectiveness of Economic Recovery Policy and Irrational Behavior Predictions. *Jurnal Bina Praja*, *14*(2), 239–250. https://doi.org/10.21787/jbp.14.2022.239-250

61) Rajamma, R. K., Paswan, A. K., & Hossain, M. M. (2009). Why do shoppers abandon shopping cart? Perceived waiting time, risk, and transaction inconvenience. *Journal of Product & Brand Management*, *18*(3), 188–197. https://doi.org/10.1108/10610420910957816

62) Rita, P., Oliveira, T., & Farisa, A. (2019). The impact of e-service quality and customer satisfaction on customer behavior in online shopping. *Heliyon*, *5*(10), e02690. https://doi.org/10.1016/j.heliyon.2019.e02690

63) Saaty, T. L. (1990). THE ANALYTIC HIERARCHY PROCESS IN CONFLICT MANAGEMENT. *International Journal of Conflict Management, 1*(1), 47–68. https://doi.org/10.1108/eb022672

64) Salminen, J., Jung, S., Nielsen, L., Şengün, S., & Jansen, B. J. (2022). How does varying the number of personas affect user perceptions and behavior? Challenging the 'small personas' hypothesis! *International Journal of Human-Computer Studies, 168,* 102915. https://doi.org/10.1016/j.ijhcs.2022.102915

65) Seo, J. & Bae, S. (2023). Analysis of consumer preferences and usability of the delivery method of product instruction manuals. *International Journal of Quality Engineering and Technology, 9*(2), 97-109, http://dx.doi.org/10.1504/IJQET.2023.131573

66) Shen, J., & Zhang, H. (2024). Individuals' Social Identity and Pro-Environmental Behaviors: Cross-Cultural Evidence from 48 Regions. *Sustainability, 16*(24), 11299. https://doi.org/10.3390/su162411299

67) Sheth, J. N., Newman, B. I., & Gross, B. L. (1991). Why we buy what we buy: A theory of consumption values. *Journal of Business Research*, *22*(2), 159–170. https://doi.org/10.1016/0148-2963(91)90050-8

68) Shokouhyar, S., Shokoohyar, S., & Safari, S. (2020). Research on the influence of after-sales service quality factors on customer satisfaction. *Journal of Retailing and Consumer Services, 56*, 102139. https://doi.org/10.1016/j.jretconser.2020.102139

69) Slovic, P. (1987). Perception of Risk. *Science, 236*(4799), 280–285. https://doi.org/10.1126/science.3563507

70) Song, S., Wei, P. & Zeng, Y. (2022). Optimal add-on items recommendation service strength strategy for e-commerce platform with full-reduction-promotion. *Rairo Operations Research,56*(2), 1031-1049. https://doi.org/10.1051/ro/2022037

71) Spain, B., O'Dwyer, L., & Moston, S. (2019). Pet Loss: Understanding Disenfranchised Grief, Memorial Use, and Posttraumatic Growth. *Anthrozoös*, *32*(4), 555–568. https://doi.org/10.1080/08927936.2019.1621545

72) Susilo, A., & Ikhsan, R. B. (2020). After-sales service to increase customer satisfaction: application of importance performance analysis method. *Journal of Business Studies and Management Review, 3*(2), 1–7. https://doi.org/10.22437/jbsmr.v3i2.9698

73) Talwar, S., Dhir, A., Khalil, A., Mohan, G., & Islam, A. K. M. N. (2020). Point of adoption and beyond. Initial trust and mobile-payment continuation intention. *Journal of Retailing and Consumer Services, 55*, 102086. https://doi.org/10.1016/j.jretconser.2020.102086

74) Tang, J., Zhou, Y., Tang, T., Weng, D., Xie, B., Yu, L., Zhang, H., & Wu, Y. (2022). A Visualization Approach for Monitoring Order Processing in E-Commerce Warehouse. *IEEE Transactions on Visualization and Computer Graphics, 28*(1), 857-867. https://doi.org/10.1109/TVCG.2021.3114878

75) To, T. H., Nguyen, T. D., Tran, T. T., Tran-Ngoc, D. C., & Ly-Ngoc, T. K. (2024). Exploring the interplay between website

quality and consumer purchase behavior in e-commerce after the COVID-19 pandemic: A study of Shopee Vietnam. *International Journal of Advanced and Applied Sciences, 11*(4), 9-21. https://doi.org/10.21833/ijaas.2024.04.002

76) Walsh F. (2009). Human-animal bonds I: the relational significance of companion animals. *Family Process*, *48*(4), 462–480. https://doi.org/10.1111/j.1545-5300.2009.01296.x

77) Whitworth, B. (2005). Polite computing. *Behaviour & Information Technology*, *24*(5), 353–363. https://doi.org/10.1080/01449290512331333700

78) Wu, J., Wang, W., Li M. & Ji X. (2024). Agency or reselling: optimal return policy in E-commerce retail systems under cap-and-trade regulation. *Rairo Operations Research, 58*(5), 4035–4067. https://doi.org/10.1051/ro/2024139

79) Yogatama, A. N. (2023). The role of product information in E-commerce: A consumer-centric analysis in the marketing 5.0 era. *Jurnal Ilmiah Bisnis Dan Ekonomi Asia, 17*(3), 329–345. https://doi.org/10.32815/jibeka.v17i3.1912

80) Zavadskas, E. K., Turskis, Z., & Kildienė, S. (2014). State of art surveys of overviews on MCDM/MADM methods. *Technological and Economic Development of Economy, 20*(1), 165-179. https://doi.org/10.3846/20294913.2014.892037